

ROBBINS GELLER RUDMAN
& DOWD LLP
MICHAEL J. DOWD (135628), miked@rgrdlaw.com
JOHN K. GRANT (169813), johng@rgrdlaw.com
SHAWN A. WILLIAMS (213113), shawnw@rgrdlaw.com
Post Montgomery Center
One Montgomery Street, Suite 1800
San Francisco, California 94104
Telephone: 415-288-4545
Facsimile: 415-288-4534

And

JOHN C. HERMAN (*pro hac vice*), jherman@rgrdlaw.com
RYAN K. WALSH (*pro hac vice*), rwalsh@rgrdlaw.com
PETER M. JONES (*pro hac vice*), pjones@rgrdlaw.com
DAVID L. GANN (*pro hac vice*), dgann@rgrdlaw.com
3424 Peachtree Road, N.E.
Monarch Centre, Suite 1650
Atlanta, Georgia 30326
Telephone: 404-504-6500
Facsimile: 404-504-6501

Attorneys for Plaintiff,
U.S. Ethernet Innovations, LLC

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

U.S. ETHERNET INNOVATIONS, LLC,) Case No. 5:10-cv-03724-JW
) Case No. 5:10-cv-05254-JW
Plaintiff,) Case No. 5:10-cv-03481-JW

vs.)

ACER, INC., ET AL.,) **PLAINTIFF'S OPENING MARKMAN**
) **BRIEF IN SUPPORT OF ITS PROPOSED**
Defendants.) **CLAIM CONSTRUCTIONS**

AT&T, INC., ET AL.,)

Defendants.)

ZIONS BANCORPORATION,)

Declaratory Judgment Plaintiff.)

Judge: Hon. James Ware
Date: October 28, 2011
Time: 9:00 AM
Courtroom: 15

TABLE OF CONTENTS

1			
2	I.	INTRODUCTION	1
3	II.	TECHNOLOGY AT ISSUE.....	4
4	III.	APPLICABLE LAW	9
5	A.	General Principles	9
6	B.	Applicability of 35 U.S.C. § 112 ¶ 6	12
7	C.	Indefiniteness	13
8	D.	Person of Ordinary Skill in the Art	14
9	IV.	CLAIM TERMS IN DISPUTE.....	15
10	A.	The Court Should Adopt USEI’s Proposed Constructions For Disputed Claim Terms Relating To Host Elements	15
11		1. “host system” / “host computer”	15
12		2. “operations transparent to the host system”	18
13		3. “host processor interrupt latency”	21
14	B.	The Court Should Adopt Judge Walker’s Prior Rulings With Regard To The Disputed Claim Terms	23
15		1. “buffer memory for storing data of frames composed by the host computer for transmission on the communications medium”	23
16		2. “logic”	26
17		3. “alterable storage location”	29
18		4. “underrun” / “falls behind”	29
19	C.	The Court Should Reject Defendants’ Allegations That Certain Disputed Claim Terms Lack Written Description Or Are Indefinite	30
20		1. “frame transmission task”	30
21		2. “during the transferring of the data frame”	33
22		3. “the receive threshold logic”	35
23	D.	The Court Should Reject Defendants’ Attempt To Improperly Expand The Recited Function And Required Structure For Disputed Claim Terms Subject to 35 U.S.C. § 112 ¶ 6.....	36
24		1. “means, ..., for monitoring the transferring of data of a frame to the buffer memory”	36
25			
26			
27			
28			

1	2.	“means for comparing the counter to the threshold value in the alterable storage location and generating an indication signal to the host processor responsive to a comparison of the counter and the alterable storage location”	37
2			
3	E.	Claim Terms Which the Parties Dispute are Subject to 35 U.S.C. § 112 ¶ 6	39
4			
5	1.	“host interface means ... for managing data transfers between the host address space and the buffer memory in operations transparent to the host system”	40
6			
7	2.	“network interface means ... for managing data transfers between the buffer memory and the network transceiver”	41
8	F.	The Court Should Adopt USEI’s Proposed Construction For The Remaining Disputed Terms	42
9	V.	CONCLUSION.....	43

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

TABLE OF AUTHORITIES

CASES

<i>3Com Corp. v. Realtek Semiconductor Corp., et al.</i> , Civil Action No. 3:03-cv-2177 VRW (N.D. Cal.)	2, 25
<i>Apex Inc. v. Raritan Computer, Inc.</i> , 325 F.3d 1364, 1373 (Fed. Cir. 2003)	27
<i>Applied Med. Res. Corp. v. U.S. Surgical Corp.</i> , 448 F.3d 1324, 1332 (Fed. Cir. 2006).....	13
<i>Atmel Corp. v. Information Storage Devices, Inc.</i> , 198 F.3d 1374, 1380 (Fed. Cir. 1999)	13
<i>Biagro W. Sales, Inc. v. Grow More, Inc.</i> , 423 F.3d 1296, 1302 (Fed. Cir. 2005).....	10, 15
<i>Brookhill-Wilk 1, L.L.C. v. Intuitive Surgical, Inc.</i> , 334 F.3d 1294, 1299 (Fed. Cir. 2003)	10
<i>C.R. Bard, Inc. v. United States Surgical Corp.</i> , 388 F.3d 858, 865 (Fed Cir. 2004)	20
<i>CCS Fitness, Inc. v. Brunswick Corp.</i> , 288 F.3d 1359, 1366 (Fed. Cir. 2002).....	9, 10, 18
<i>Datamize, LLC v. Plumtree Software, Inc.</i> , 417 F.3d 1342, 1347 (Fed. Cir. 2005)	14, 33
<i>Electro Med. Sys., S.A. v. Cooper Life Scis., Inc.</i> , 34 F.3d 1048, 1054 (Fed. Cir. 1994)	11
<i>Exxon Research & Eng'g Co. v. United States</i> , 265 F.3d 1371, 1375 (Fed. Cir. 2001)	14, 33
<i>Ferguson Beauregard/Logic Controls, Div. of Dover Resources, Inc. v. Mega Systems, LLC</i> , 350 F.3d 1327, 1338 (Fed. Cir. 2003).....	14
<i>Golight, Inc. v. Wal-Mart Stores, Inc.</i> , 355 F.3d 1327, 1334-35 (Fed. Cir. 2004)	passim
<i>Greenberg v. Ethicon Endo-Surgery, Inc.</i> , 91 F.3d 1580, 1583-84 (Fed. Cir. 1996)	12
<i>Hockerson-Halberstadt, Inc. v. Converse Inc.</i> , 183 F.3d 1369, 1374 (Fed. Cir. 1999).....	10
<i>Home Diagnostics, Inc. v. Lifescan, Inc.</i> , 381 F.3d 1352, 1358 (Fed. Cir. 2004)	9
<i>Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.</i> , 381 F.3d 1111, 1116 (Fed. Cir. 2004).....	9, 10
<i>Inverness Med. Switz. GmbH v. Warner Lambert Co.</i> , 309 F.3d 1373, 1380-82 (Fed. Cir. 2002)	11
<i>Irdeto Access, Inc. v. Echostar Satellite Corp.</i> , 383 F.3d 1295, 1300 (Fed. Cir. 2004)	21, 30
<i>Liebel-Flarsheim Co. v. Medrad, Inc.</i> , 358 F.3d 898, 910 (Fed. Circ. 2004).....	10, 32
<i>Lighting World, Inc. v. Birchwood Lighting, Inc.</i> , 382 F.3d 1354, 1358 (Fed. Cir. 2004)	12, 28
<i>Linear Tech. Corp. v. Impala Linear Corp.</i> , 379 F.3d 1311, 1320 (Fed. Cir. 2004).....	26, 27, 39

1	<i>Markman v. Westview Instruments, Inc.</i> , 52 F.3d 967, 979 (Fed. Cir. 1995)	9, 10, 11
2	<i>Medtronic, Inc. v. Advanced Cardiovascular Sys.</i> , 248 F.3d 1303, 1311, 1313 (Fed.	
3	Cir. 2001)	13
4	<i>Moba, B.V. v. Diamond Automation, Inc.</i> , 325 F.3d 1306, 1319, (Fed. Cir. 2003)	33
5	<i>Multiform Desiccants, Inc. v. Medzam, Ltd.</i> , 133 F.3d 1473, 1477 (Fed. Cir. 1998)	9
6	<i>PCTEL, Inc. v. Agere Sys.</i> , No. 03-2474, U.S. Dist. LEXIS 34288, at *35-36 (N.D.	
7	Cal. Sept. 8, 2005)	27
8	<i>Personalized Media Commc'ns, LLC v. U.S. Int'l TradeComm'n</i> , 161 F.3d 696, 702	
9	(Fed. Cir. 1998)	12
10	<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005)	passim
11	<i>SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.</i> , 242 F.3d 1337, 1343-44	
12	(Fed. Cir. 2001)	11
13	<i>Specialty Composites v. Cabot Corp</i> , 845 F.2d 981, 987 (Fed. Cir. 1988)	11
14	<i>Vas-Cath, Inc. v. Mahurkar</i> , 935 F.2d 1563 (Fed. Cir. 1991)	33
15	<i>Vitronics Corp. v. Conceptoronic, Inc.</i> , 90 F.3d 1576, 1582 (Fed. Cir. 1996)	passim
16	<i>Watts v. XL Sys., Inc.</i> , 232 F.3d 877, 880 (Fed. Cir. 2000)	13

STATUTES

17	35 U.S.C. § 112 (2010)	passim
----	------------------------------	--------

Pursuant to Patent Local Rule 4-5, Plaintiff, U.S. Ethernet Innovations, LLC (“USEI”), respectfully submits this brief in support of USEI’s proposed constructions for the disputed claim terms in the above-referenced actions.¹ Defendants² are accused of infringing four U.S. patents.³

I. INTRODUCTION

USEI is the successor-in-interest to 3Com Corporation’s (“3Com”) valuable Ethernet patent portfolio, covering fundamental Ethernet networking technology. 3Com developed its ground-breaking technology during the 1990s and became a global leader in Ethernet products. 3Com’s Ethernet technology represented significant advances in the industry by providing for dramatic increases in computer performance relating to communications over an Ethernet network. 3Com’s Ethernet networking technology provides improved computer performance by, among other things, capturing the advantages of the two competing methods of data transmission, while avoiding the disadvantages previously associated with each. *See* ‘872 Patent, col. 2:7-10 (“It is desirable to provide the advantages of a transmit data buffer, while

¹ On March 7, 2011, this Court related the three actions referenced above for the purposes of claim construction. (Dkt. 497 and 498.)

² As used herein, “Defendants” refers to the all of the opposing parties from each of the three related actions referenced above, including: (from the Acer action) Acer, Inc.; Acer America Corporation; Apple, Inc.; ASUS Computer International; ASUSTeK Computer Inc.; Dell Inc.; Fujitsu Ltd.; Fujitsu America, Inc.; Gateway, Inc.; Hewlett Packard Co.; Sony Corporation; Sony Corporation of America; Sony Electronics Inc.; Toshiba Corporation; Toshiba America, Inc.; and Toshiba America Information Systems, Inc.; The Acer Intervenor are: Intel Corporation; Atheros Communications, Inc.; NVIDIA Corporation; Marvell Semiconductor, Inc.; Broadcom Corporation; (from the AT&T action) AT&T Mobility, LLC; Barnes & Noble, Inc.; Claire’s Boutiques, Inc.; J. C. Penney Company, Inc.; Sally Beauty Holdings, Inc.; Ann Taylor Stores Corporation; Ann Taylor Retail, Inc.; Harley-Davidson, Inc.; Harley-Davidson Motor Company, Inc.; Kirkland’s Inc.; Kirkland’s Stores, Inc.; Macy’s, Inc.; Macy’s Retail Holdings, Inc.; Macy’s West Stores, Inc.; New York & Company, Inc.; Lerner New York, Inc.; Radioshack Corporation; Rent-A-Center, Inc.; The Dress Barn; and (from the Zions action) Zions Bancorporation.

³ The four patents are: U.S. Patent No. 5,307,459 (the “‘459 Patent”) issued April 26, 1994; U.S. Patent No. 5,434,872 (the “‘872 Patent”) issued July 18, 1995; U.S. Patent No. 5,732,094 (the “‘094 Patent”) issued March 24, 1998; U.S. Patent No. 5,299,313 (the “‘313 Patent”) issued March 29, 1994 (collectively, the “Patents-in-Suit”). *See* Declaration of Peter M. Jones in Support of Plaintiff’s Opening *Markman* Brief (“Jones Decl.”), Exhibit A (‘459 Patent), Exhibit B (‘872 Patent), Exhibit C (‘094 Patent), Exhibit D (‘313 Patent).

1 maintaining the communications throughput available from the simpler FIFO based systems.”).
2 Because 3Com’s Ethernet networking technology directly affects a computer’s performance (and
3 by extension a computer user’s “online” experience), the technology became valuable very
4 quickly. Accordingly, 3Com pursued patent protection for as many aspects of the technology as
5 possible. The 3Com Ethernet patent portfolio is comprised of thirty-seven U.S. and foreign
6 patents, with a wide variety of claims, including claims covering both the network adapter and
7 the methods by which the host computer works with the network adapter to achieve the superior
8 processing efficiency.
9

10 Despite 3Com’s significant efforts to protect its technology, 3Com was eventually forced
11 out of the Ethernet product business as a result of the widespread implementation of its Ethernet
12 technology by its competitors. In the years that followed, 3Com attempted to police the
13 widespread infringement of its technology and successfully entered into a number of license
14 agreements. 3Com’s enforcement efforts also led to lengthy and thorough litigation involving
15 three of the four Patents-in-Suit in this Court before the Honorable Vaughn R. Walker—*3Com*
16 *Corp. v. Realtek Semiconductor Corp., et al.*, Civil Action No. 3:03-cv-2177 VRW (N.D. Cal.)
17 (the “Realtek Litigation”). The Realtek Litigation resulted in a \$45.3 million jury verdict—and
18 later a settlement of \$70 million—from a single defendant and judgment for 3Com.⁴
19

20 The parties and the Court in the Realtek Litigation expended considerable time and
21 resources resolving many issues related to these patents. For example, the parties and the Court
22 undertook a lengthy claim construction process, which resulted in a 31-page *Markman* Order
23 from Judge Walker addressing several of the claim terms in dispute here. Order, *3Com Corp. v.*
24

25
26 ⁴ Shortly before he announced his retirement, on September 28, 2010, Judge Walker determined that
27 this litigation was related to the Realtek Litigation, but that transfer of these actions to his chambers
28 was not warranted—presumably because of his impending retirement.

1 *Realtek Semiconductor Corp., et al.*, 3:03-cv-2177 VRW (N.D. Cal. January 8, 2007)
 2 (“*Markman* Order”), attached to Jones Decl. as Exhibit E. Given the significant investment of
 3 judicial resources to date, USEI is prepared to accept the entirety of the *Markman* Order.

4 In contrast, Defendants seek to undermine the *Markman* Order in several material
 5 respects. For example, Defendants go to great lengths to undermine Judge Walker’s ruling on
 6 the construction of the “buffer memory” and “logic” terms. Defendants even went so far as to
 7 propose a construction for “buffer memory” terms that is nearly identical to the construction
 8 Judge Walker specifically rejected.⁵

10 By taking positions such as this, Defendants leave the Court with sixty-one disputed
 11 claim terms for construction—the overwhelming majority of which have been proposed by
 12 Defendants. Judge Walker’s *Markman* Order addresses issues related to thirty of those claim
 13 terms. In addition to the thirty terms previously addressed by Judge Walker, the Court has been
 14 asked to construe thirty-one other terms: eighteen terms which are not subject to 35 U.S.C. §112,
 15 ¶ 6, eight terms which the parties agree are subject to §112, ¶ 6, and five terms which the parties
 16 dispute are subject to §112, ¶ 6.

18 Application of the well-established rules of claim construction as set forth by the Federal
 19 Circuit, sitting *en banc*, in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), including
 20 consideration of the constructions previously adopted by Judge Walker, demonstrates that the
 21

22 ⁵ On September 16, 2011, Defendants informed USEI for the first time that they would adopt the
 23 construction for the term “buffer memory” ordered by Judge Walker in the Realtek Litigation and
 24 proposed by USEI here. *See* E-mail from Seth Sproul dated September 16, 2011, attached to Jones
 25 Decl. as Exhibit F. Defendants also stated that they would “withdraw their construction of the
 26 phrase ‘buffer memory for storing data of frames composed by the host computer for transmission
 27 on the communications medium.’” *Id.* However, in response to a request for clarification,
 28 Defendants confirmed that they “do not agree to USEI’s proposed construction” for the larger buffer
 memory phrase. *See* E-mail from Seth Sproul dated September 19, 2011, attached to Jones Decl. as
 Exhibit G. Accordingly, the appropriate construction of the phrase “‘buffer memory for storing data
 of frames composed by the host computer for transmission on the communications medium” remains
 in dispute. *See* Section IV.B.1 below.

1 Court should adopt USEI's proposed constructions as set forth in the Patent Local Rule 4-3 Joint
 2 Claim Construction and Prehearing Statement.

3 **II. TECHNOLOGY AT ISSUE**

4 The Patents-in-Suit are part of a portfolio of patents related to certain fundamental
 5 aspects of Ethernet networking technology. Generally, the Patents-in-Suit relate to improving a
 6 computer's performance, including host processor efficiency, associated with communications
 7 over an Ethernet network.
 8

9 When data is received by a computer (for example, a Hewlett-Packard laptop) from a
 10 network or transmitted to a network from a computer, the data typically passes through a
 11 "buffer."⁶ 3Com created several novel ways of improving the overall data transfer and computer
 12 performance, including by providing technology capable of initiating the process of transferring
 13 a data frame⁷ from the buffer to the host computer or initiating the transmission of a data frame
 14 from the buffer to the network before that frame is completely loaded into the buffer, referred to
 15 as "early initiation." Early initiation speeds up the overall data transfer process by starting the
 16
 17
 18
 19
 20

21 ⁶ There are many different types of "buffers." A review of the specifications of the Patents-in-
 22 Suit reveals references to 1.5K buffer, 5K byte ring buffer, adapter buffer, data buffer, descriptor
 23 buffer, download buffer, FIFO buffer, first buffer, first data buffer, first host data buffer, frame
 24 buffer, host buffer, host data buffer, host independent buffer, host receive area buffer, internal
 25 receive buffer, look buffer, network adapter buffer, network buffer, onboard buffer, onboard
 26 transmit data buffer, receive buffer, receive area buffer, receive frame buffer, receive ring buffer,
 resident data buffer, ring buffer, TD buffer, transfer descriptor buffer, transfer queue buffer,
 transmit buffer, transmit data buffer, transmit descriptor buffer, transmit descriptor ring buffer.
See, e.g., Jones Decl., Exhibit A ('459 Patent), Exhibit B ('872 Patent), Exhibit C ('094 Patent),
 Exhibit D ('313 Patent).

27 ⁷ When data is transmitted over an Ethernet network, it is typically organized in units called
 28 "frames" or "packets."

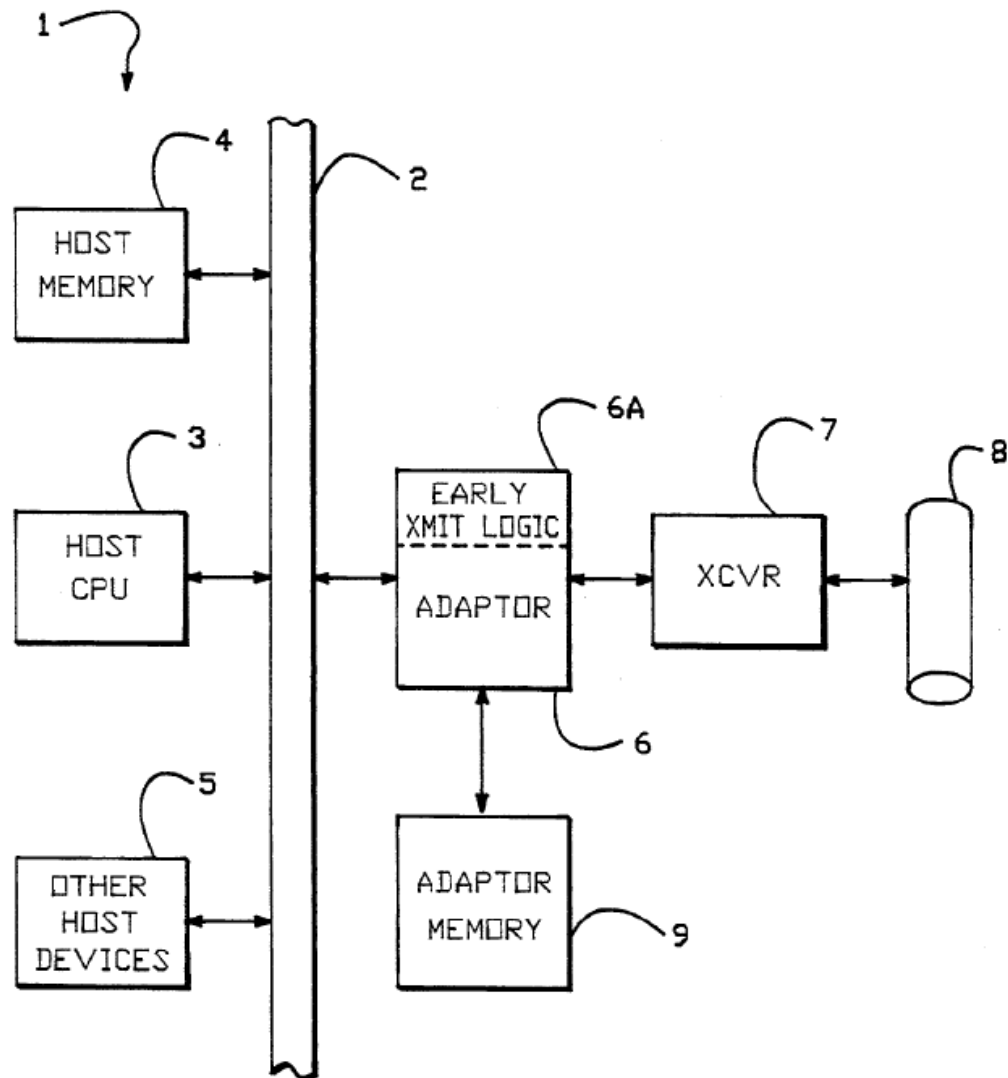
1 process of transferring (or transmitting)⁸ the data of a frame without waiting for all the data in
2 that frame to arrive at the buffer.



13
14 The '459 Patent discloses, among other things, an “early receive” technology that speeds
15 up overall computer processor performance. The '459 Patent discloses the use of an “indication
16 signal” that allows the host system to be notified of the receipt of data prior to transfer of that
17 data to the host system.

18 The '872 and '094 Patents disclose, among other things, a technology to initiate the
19 actual transmission of a data frame to the network before all of the data of the frame is
20 transferred into the buffer from the host computer. In other words, the data begins to flow out of
21 the buffer before the data frame is completely transferred into the buffer from the host.
22

23
24
25
26 ⁸ In the relevant art, the term “transfer” is typically used to describe the movement of data within the
27 computer, and the term “transmit” is typically used to describe the movement of data from the
28 computer to the network.



'872 Patent, Fig. 1

The '872 Patent also addresses some of the issues that can arise due to the early initiation of the transmission of the frame to the network. For example, if the transmission begins too soon and the flow of data into the buffer falls behind the flow of data out of the buffer, an "underrun condition" is created. Accordingly, the claims also describe underrun control logic capable of sending a "bad frame signal"—that is, a signal that an error has occurred. Further, status information, such as whether the frame was sent successfully, is also claimed.

The '094 Patent also discloses methods for carrying out early transmission of data frames. For example, the '094 Patent discloses, among other things, methods that include executing a transfer task initiated in a host computer that transfers data into a buffer and executing a transmission task that transmits that data from the buffer to a network. By monitoring the amount of data of a frame transferred into the buffer and comparing that amount to a threshold value, the timing of the transmission can occur before the data frame is fully transferred into the buffer. The '094 Patent, like the '872 Patent, also discloses the retention of data in the buffer, such that, in the event of a transmit error, the data can be re-sent from the buffer, a significant improvement over the prior art systems discussed in the specifications of the Patents-in-Suit. As the figure below demonstrates, the prior art systems (for example, the National Semiconductor DP83932B cited in the Patents-in-Suit) were unable to retain data as it was constantly being replaced by new data flowing into the buffer.

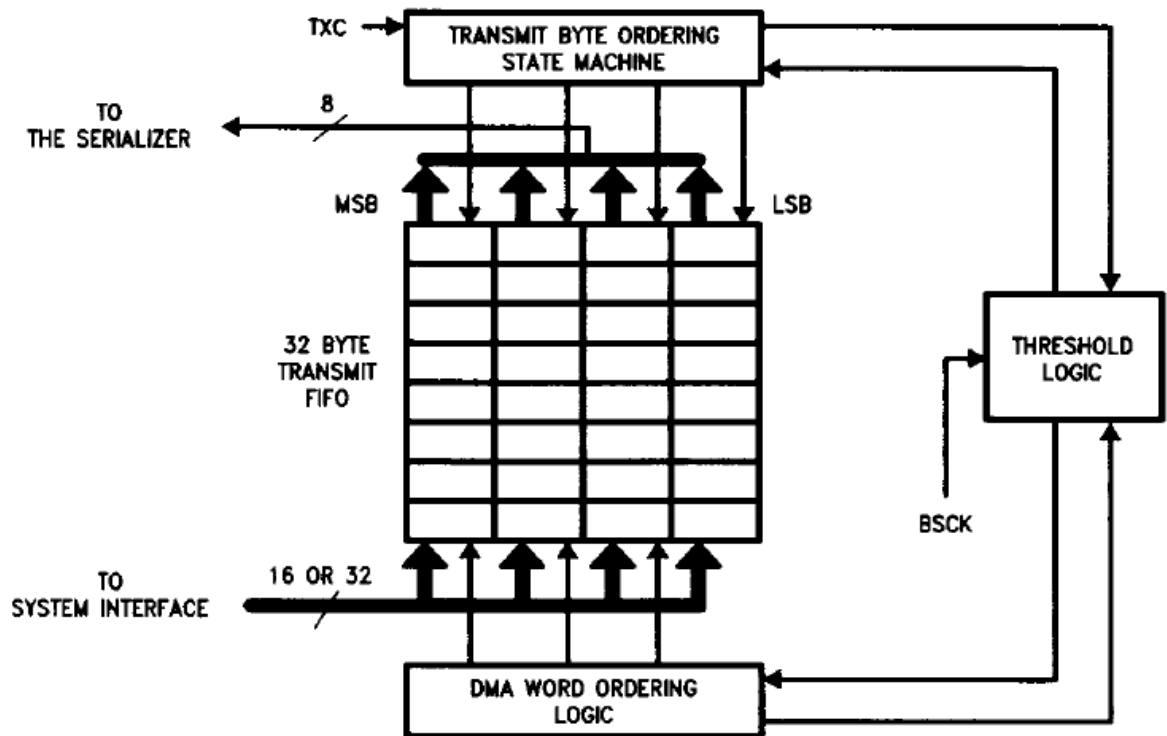


FIGURE 1-6. Transmit FIFO

1 National Semiconductor DP83932B Systems-Oriented Network Interface Controller Datasheet
 2 (Preliminary), at 10 (June 1991), attached to Jones Decl. as Exhibit H. The '094 Patent also
 3 discloses methods for detecting situations where the transmission is initiated too early, methods
 4 for changing the threshold value, and methods for providing feedback to the host computer
 5 regarding the threshold value.

6
 7 The '313 Patent discloses, among other things, technology to address the inefficiencies
 8 associated with using a buffer memory on the host address space for managing the flow of data
 9 between a host and the network interface controller, including through managing the
 10 transmission and reception of data between a host system and a network that minimizes host
 11 processor overhead and host system bus bandwidth by using a buffer memory outside of the host
 12 address space. The buffer memory can be mapped to the host address space using descriptors to
 13 identify and locate data, and the buffer memory is available to both the host and the network
 14 adapter without overburdening the host processor.
 15

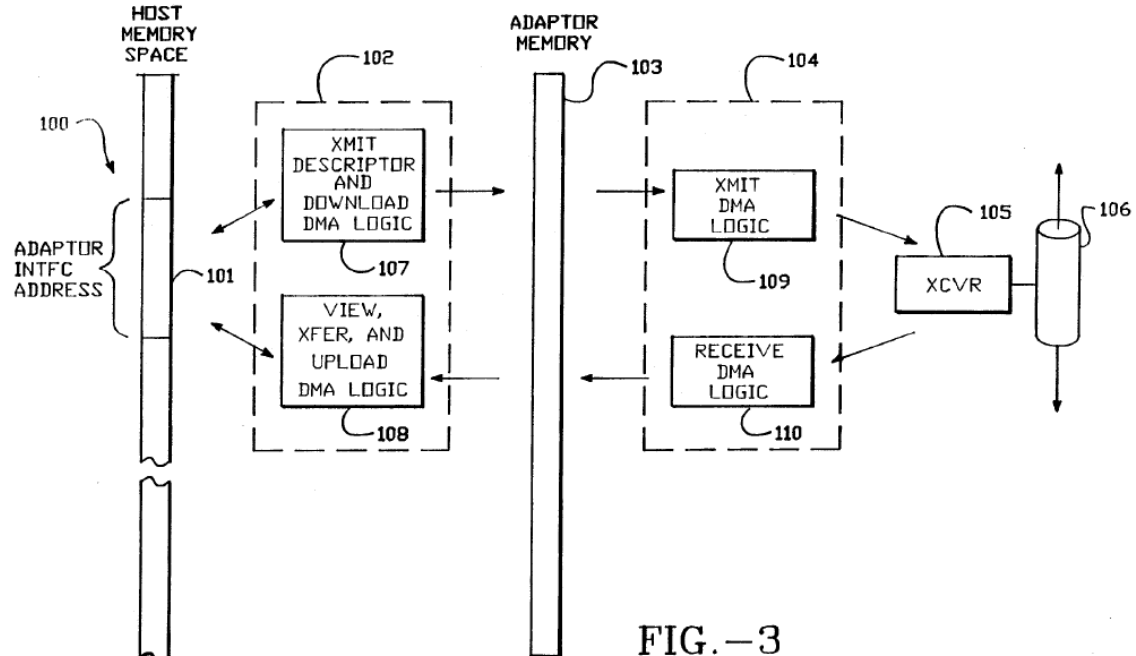


FIG. - 3

16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28 '313 Patent, Fig. 3.

1 **III. APPLICABLE LAW**

2 **A. General Principles**

3 “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention
4 to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303,
5 1312 (Fed. Cir. 2005) (en banc) (citation omitted). In construing a patent’s claims, a Court seeks
6 to give disputed terms the meaning they would have “to a person of ordinary skill in the art in
7 question at the time of the invention.” *Phillips*, 415 F.3d at 1313; *accord Innova/Pure Water,*
8 *Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004); *Home*
9 *Diagnostics, Inc. v. Lifescan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004); *Multiform Desiccants,*
10 *Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). A Court construes the scope and
11 meaning of disputed claim terms as a matter of law. *Markman v. Westview Instruments, Inc.*, 52
12 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

14 A claim construction analysis begins by looking “to the words of the claims themselves
15 ... to define the scope of the patented invention.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d
16 1576, 1582 (Fed. Cir. 1996); *see also Markman*, 52 F.3d at 980. In so doing, there is a “heavy
17 presumption” that disputed claim terms take on their full ordinary and customary meaning. *CCS*
18 *Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (quotations omitted). “In
19 some cases, the ordinary meaning of claim language as understood by a person of skill in the art
20 may be readily apparent even to lay judges, and claim construction in such cases involves little
21 more than the application of the widely accepted meaning of commonly understood words.”
22 *Phillips*, 415 F.3d at 1314. Where the meaning of a claim term as understood by persons of skill
23 in the art is not immediately apparent, a court should look “to ‘those sources available to the
24 public that show what a person of skill in the art would have understood disputed claim language
25 to mean.’” *Id.* Those sources include “the words of the claims themselves, the remainder of the
26
27
28

1 specification, the prosecution history, and extrinsic evidence concerning relevant scientific
 2 principles, the meaning of technical terms, and the state of the art.” *Id.*; *see also Brookhill-Wilk*
 3 *I, L.L.C. v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2003); *Hockerson-*
 4 *Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999).

5 Because “the claims themselves provide substantial guidance as to the meaning of
 6 particular claim terms,” the “context in which a term is used in the asserted claim” and “the
 7 usage of a term in . . . other claims” must be considered to ascertain how the disputed terms
 8 should be understood. *Phillips*, 415 F.3d at 1314-15; *see also Biagro W. Sales, Inc. v. Grow*
 9 *More, Inc.*, 423 F.3d 1296, 1302 (Fed. Cir. 2005) (“It is elementary that claim construction
 10 begins with, and remains focused on, the language of the claims.”). Other asserted and
 11 unasserted claims of the patent can often provide “enlightenment as to the meaning of a claim
 12 term.” *Phillips*, 415 F.3d at 1314 (quoting *Vitronics*, 90 F.3d at 1582). For instance, “the
 13 presence of a dependent claim that adds a particular limitation gives rise to a presumption that
 14 the limitation in question is *not* present in the independent claim.” *Phillips*, 415 F.3d at 1314-15
 15 (emphasis added); *see also Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir.
 16 2004).

17 The claims, however, do not stand alone. *See Phillips*, 415 F.3d at 1315; *Markman*, 52
 18 F.3d at 978 (claims are part of “a fully integrated written instrument”). For that reason the
 19 claims “must be read in view of the specification, of which they are a part.” *Markman*, 52 F.3d
 20 at 979; *see also Phillips*, 415 F.3d at 1315; *Vitronics*, 90 F.3d at 1582 (“[T]he specification is
 21 always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the
 22 single best guide to the meaning of a disputed term.”). The specification “may reveal a special
 23 definition given to a claim term by the patentee that differs from the meaning it would otherwise
 24 possess.” *Phillips*, 415 F.3d at 1316; *see also CCS Fitness*, 288 F.3d at 1366. In other cases, the
 25
 26
 27
 28

1 specification could “reveal an intentional disclaimer, or disavowal, of claim scope by the
 2 inventor.” *Phillips*, 415 F.3d at 1316; *see also SciMed Life Sys., Inc. v. Advanced*
 3 *Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001).

4 When considering the specification, the Court should avoid “one of the cardinal sins of
 5 patent law – reading a limitation from the written description into the claims.” *Phillips*, 415 F.3d
 6 at 1320; *Electro Med. Sys., S.A. v. Cooper Life Scis., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994)
 7 (“particular embodiments appearing in a specification will not be read into the claims when the
 8 claim language is broader than such embodiments”); *Specialty Composites v. Cabot Corp.*, 845
 9 F.2d 981, 987 (Fed. Cir. 1988) (noting that limitations “should not be read from the specification
 10 into the claims”). Although the specification often informs the meaning of claim terms, it does
 11 not change those meanings unless the patentee has chosen to be his own lexicographer by clearly
 12 setting out his intended meaning either expressly or by implication. *See Phillips*, 415 F.3d at
 13 1319; *Vitronics*, 90 F.3d at 1582.

14 The Court may also consider the prosecution history, which is a record of the proceedings
 15 between the U.S. Patent & Trademark Office and the patentee during the application and
 16 reexamination process. *See Phillips*, 415 F.3d at 1317. The prosecution history, however, “often
 17 lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id*;
 18 *see also Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380-82 (Fed. Cir.
 19 2002) (ambiguity of prosecution history made it less relevant to claim construction).

20 Finally, the Federal Circuit has clarified that extrinsic evidence, including expert and
 21 inventor testimony, dictionaries, and learned treatises, “may be considered if the court deems it
 22 helpful in determining ‘the true meaning of language used in the patent claims.’” *Phillips*, 415
 23 F.3d at 1317-18 (quoting *Markman*, 52 F.3d at 980) (“judges may . . . rely on dictionary
 24 definitions when construing claim terms, so long as the dictionary definition does not contradict
 25
 26
 27
 28

any definition found in or ascertained by a reading of the patent documents”). Therefore, the Court should be mindful of all relevant evidence to ensure that it does not improperly narrow the claim terms.

Although the Federal Circuit has declined to prescribe “a rigid algorithm for claim construction,” it has urged the district courts to follow an approach that gives appropriate weight to all the relevant sources, such that patent claims will be given their “broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art.” *Phillips*, 415 F.3d at 1316, 1324 (internal citations and quotations omitted). Following such an approach here should lead the Court to adopt USEI’s proposed constructions.

B. Applicability of 35 U.S.C. § 112 ¶ 6

Determining “[w]hether certain claim language invokes 35 U.S.C. § 112, ¶ 6 is an exercise in claim construction and is therefore a question of law.” *Personalized Media Commc’ns, LLC v. U.S. Int’l TradeComm’n*, 161 F.3d 696, 702 (Fed. Cir. 1998). Essentially, the Court must determine whether the claim term at issue is solely drawn to a function (“means” for performing some task) as opposed to structure. If the claim term is purely functional—commonly referred to as a “means-plus-function” term, then the claim term is limited to the structure (and equivalents) for performing the function found in the patent.

“[A] claim limitation that actually uses the word ‘means’ invokes a rebuttable presumption that § 112 ¶ 6 applies. By contrast, a claim term that does not use ‘means’ will trigger the rebuttable presumption § 112 ¶ 6 **does not apply**.” *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004) (emphasis added) (internal citation and quotation omitted). “The presumption flowing from the absence of the term ‘means’ is a strong one that is not readily overcome.” *Lighting World, Inc.*, 382 F.3d at 1358; *see also Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583-84 (Fed. Cir. 1996) (“The question whether a

1 claim element triggers section 112(6) is ordinarily not a difficult one [T]he use of the term
2 ‘means’ has come to be so closely associated with ‘means-plus-function’ claiming that it is fair
3 to say that the use of the term ‘means’ . . . generally invokes section 112(6) and that the use of a
4 different formulation generally does not.”); *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir.
5 2000) (“building upon a line of cases interpreting 35 U.S.C. § 112, paragraph 6, . . . we stated
6 that the failure to use the word ‘means’ in a claim created a rebuttable presumption 35 U.S.C. §
7 112, paragraph 6 did not apply.”).

9 With regard to means-plus-function claims under 35 U.S.C. § 112, ¶ 6, claim
10 construction involves two steps: (1) determining the recited function of the claim; and (2)
11 identifying the corresponding structure disclosed in the written description, and equivalents
12 thereof. *See Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir.
13 2006). A structure is “corresponding” if it is clearly linked or associated with performing the
14 recited function, as perceived by one of ordinary skill in the art. *Medtronic, Inc. v. Advanced*
15 *Cardiovascular Sys.*, 248 F.3d 1303, 1311, 1313 (Fed. Cir. 2001). Moreover, the disclosure of
16 structure may be inherent or implicit in the specification if it would have been clear to those
17 skilled in the art what structure corresponds to the means-plus-function limitation. *Atmel Corp.*
18 *v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1380 (Fed. Cir. 1999). Finally, the
19 corresponding structure should only incorporate that which is necessary to perform the claimed
20 function, and nothing more. *See Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1334-35
21 (Fed. Cir. 2004) (stating structures “not required for performing the claimed function” are
22 “superfluous” to claim construction analysis and do not serve as claim limitations).

25 **C. Indefiniteness**

26 The purpose of the definiteness requirement is to ensure that the claim language
27 adequately notifies the public of the patentee’s right to exclude. 35 U.S.C. § 112 (2010), ¶ 2.
28

1 But it “does not compel absolute clarity. Only claims ‘not amenable to construction’ or
 2 ‘insolubly ambiguous’ are indefinite.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342,
 3 1347 (Fed. Cir. 2005) (citation omitted). “Thus, the definiteness of claim terms depends on
 4 whether those terms can be given **any reasonable meaning**.” *Id.* (emphasis added); *see also*
 5 *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001) (“If the
 6 meaning of the claim is discernible, even though the task may be formidable and the conclusion
 7 may be one over which reasonable persons will disagree, we have held the claim sufficiently
 8 clear to avoid invalidity on indefiniteness grounds.”)

10 **D. Person of Ordinary Skill in the Art**

11 Before engaging in actual claim construction, the Court should make a finding as to who
 12 would have been a person of ordinary skill in the art, around the time that the applications
 13 leading to the Patents-in-Suit were filed. *Phillips*, 415 F.3d at 1313. This is important because
 14 words can have “different meanings to different people and in different contexts,” and it is the
 15 “use of [those] words in the context of the written description [and by] those skilled in the
 16 relevant art that accurately reflects both the ‘ordinary’ and the ‘customary’ meaning of the terms
 17 in the claims.” *Ferguson Beauregard/Logic Controls, Div. of Dover Resources, Inc. v. Mega*
 18 *Systems, LLC*, 350 F.3d 1327, 1338 (Fed. Cir. 2003).

20 A person of ordinary skill in the art around the time the applications for the Patents-in-
 21 Suit were filed would have had at least a bachelor’s degree in computer science, computer
 22 engineering, or a related field, including coursework on computer architecture or hardware, and
 23 one or both of the following: (1) two years of experience relating to the general area of network
 24 communications; or (2) an advanced degree in computer engineering, computer science or a
 25 related field, with some experience in the general area of network communications. *See*
 26 Declaration of Dr. Michael Mitzenmacher in Support of Plaintiff’s U.S. Ethernet Innovations,
 27
 28

LLC’s Claim Construction, at 2 (“Mitzenmacher Decl.”), attached to Jones Decl. as Exhibit I. Dr. Michael Mitzenmacher is at least a person of ordinary skill in the art in view of his educational history, teaching, and related work. *Id.*

IV. CLAIM TERMS IN DISPUTE

A. The Court Should Adopt USEI’s Proposed Constructions For Disputed Claim Terms Relating To Host Elements

1. “host system” / “host computer”

‘459 Patent, Claims 1, 3, 22, 24, 34, 44, and 46

‘872 Patent, Claims 1 and 21

‘094 Patent, Claims 1, 9, 12, 28, and 39

‘313 Patent, Claims 1, 3, 5, 7, 9, 13, and 17

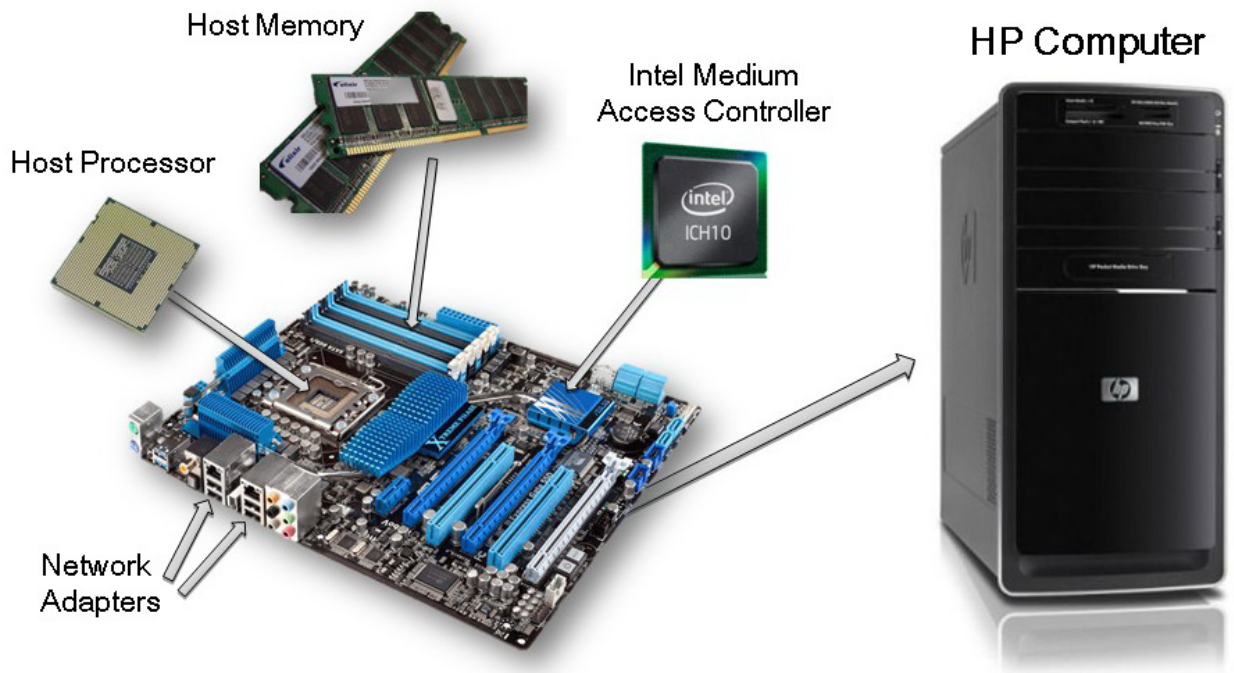
Plaintiff’s Position	Defendants’ Position
Plain and ordinary meaning. Alternatively: a system or computer capable of sending or receiving data, which includes a host processor and host memory	a system that has a host processor, host memory and other host devices, all communicating through a host system bus, such as an EISA bus

When read in the context of the claims and specifications of the Patents-in-Suit, “host system” and “host computer” have a plain and ordinary meaning to those of ordinary skill in the art—“a system or computer capable of sending or receiving data, which includes a host processor and host memory.” *See* Mitzenmacher Decl. at 3-4. Here, the plain and ordinary meaning of the disputed terms is found in the language of the claims themselves. *See Biagro W. Sales*, 423 F.3d at 1302 (“It is elementary that claim construction begins with, and remains focused on, the language of the claims.”); *Phillips*, 415 F.3d at 1314-15 (“claims themselves provide substantial guidance as to the meaning of particular claim terms”).

For example, claim 1 of the ‘459 Patent describes “[a]n apparatus for *transferring a data frame* between a network transceiver, coupled with a network, and a host system.” *See also* ‘872 Patent, Claim 1 (“For a system *transmitting frames of data* across a communications medium”); ‘094 Patent, Claim 1 (“[a] method for *transmitting a frame of data* from a host system through a

1 network interface device to a network”); ‘313 Patent, Claim 1 (“An apparatus for *controlling*
2 *communication* between a host system and a network transceiver coupled with a network.”). By
3 describing a system that is capable of “transferring a data frame,” “transmitting frames of data,”
4 and “controlling communication,” the claims of the Patents-in-Suit make clear that a “host
5 system” or “host computer” is “capable of sending or receiving data.” USEI’s proposed
6 construction also finds support in the specifications. *See, e.g.*, ‘872 Patent, col. 4:26 (host
7 computer also referred to as “sending system”).
8

9 In addition, the claims of the Patents-in-Suit define a “host system” as including a host
10 processor and host memory. ‘459 Patent, Claim 1 (“a host system which includes a *host*
11 *processor and host memory*”); *see also* ‘459 Patent, Claims 22, 34, 44 (“a host system which
12 includes an interruptable *host processor* with interrupt latency and *host memory*”). Because
13 USEI’s proposed construction is explicitly supported by the claims of the Patents-in-Suit, the
14 Court should find that “host system” and “host computer” have a plain and ordinary meaning to
15 those of ordinary skill in the art—“a system or computer capable of sending or receiving data,
16 which includes a host processor and host memory.” Moreover, the “host” requirements of the
17 Patents-in-Suit are met by the various accused laptop and computer products from the computer
18 manufacturers, as shown below.
19
20
21
22
23
24
25
26
27
28



Defendants improperly seek to import the limitations “other host devices” and “all communicating through a host system bus, such as an EISA bus” from the written description of a preferred embodiment into the claim. *See* ‘313 Patent, Description of the Preferred Embodiments, col. 4:5-15. Accordingly, adopting the Defendants’ proposed construction would require the Court to commit “one of the cardinal sins of patent law – reading a limitation from the written description into the claims.” *Phillips*, 415 F.3d at 1320. Moreover, Defendants tacitly admit that “host system” requires no construction as they use the phrase in their own proposed constructions for other disputed terms. *See, e.g.*, Section IV.A.2 below. For all each of these reasons, the Court should find that the terms “host system” and “host computer” are entitled to their plain and ordinary meaning—“a system or computer capable of sending or receiving data, which includes a host processor and host memory.”

2. “operations transparent to the host system”

‘313 Patent, Claim 1

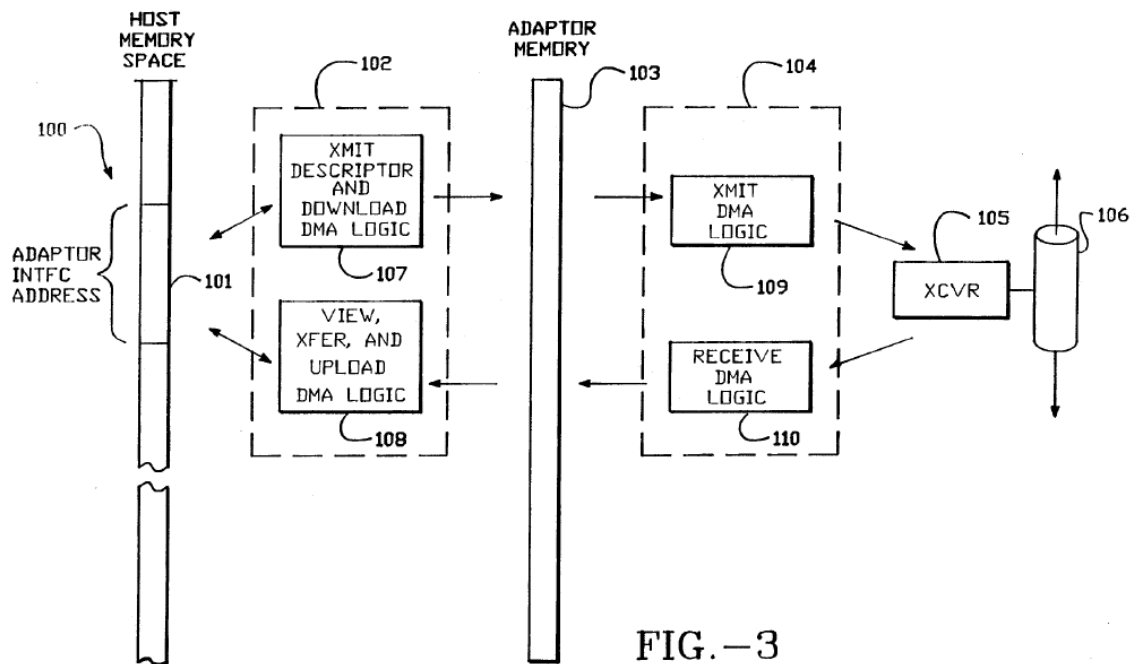
Plaintiff’s Position	Defendants’ Position
Plain and ordinary meaning. Alternatively: operations capable of being performed without the involvement of the host processor	operations that do not involve the host system

Once the Court construes “host system,” the term “operations transparent to the host system” should be readily understood and requires no further construction. If, however, the Court finds that construction of this term is necessary, a person of ordinary skill in the art would understand “operations transparent to the host system” to mean “operations capable of being performed without the involvement of the host processor” in view of the claims and specification of the ‘313 Patent. *See Mitzenmacher Decl.* at 17-19.

Defendants use the terms “operations” and “host system” in their proposed construction, demonstrating that the real dispute here is whether the term “transparent” requires construction. In the context of computer systems, the term “transparent” has a plain and ordinary meaning to one of ordinary skill in the art. *See Webster’s New World Dictionary of Computer Terms* (3rd ed. 1988) (transparent: pertaining to a process that is not visible to the user or to other devices); *The Penguin’s Dictionary of Information Tech. and Computer Science* (1992) (transparent: not perceived by the initiator of an operation. In other words, the hardware and software takes care of the details without involving the initiator.). Accordingly, “operations transparent to the host system” should be allowed its plain and ordinary meaning. *See CCS Fitness, Inc.*, 288 F.3d at 1366 (noting “heavy presumption” that disputed claim terms take on their full ordinary and customary meaning).

If the Court determines further construction is necessary, USEI’s proposed construction is supported by the language of the claims and the specification of the ‘313 Patent. The ‘313

specification notes prior art systems that “utilize a significant portion of the host processor overhead and host bus bandwidth” when “managing the flow of data between the host system address space and the network interface controller.” See ‘313 Patent, col. 1:43-1:53. The specification also notes a desire to “minimize[] the use of host processor overhead and host system bus bandwidth, and simplif[y] the software executed by the host required for managing the interface.” ‘313 Patent, col. 1:54-1:58. The claimed invention is able to reduce the use of host processor overhead and host system bus bandwidth by providing, among other things, host interface logic which is capable of managing data transfers between the host address space and the buffer memory without burdening the host processor. Specifically, claim 1 of the ‘313 Patent provides, in part, as follows: “host interface means [102 below], sharing the host address space with the host, for managing data transfers between the host address space and the buffer memory in operations transparent to the host system.”



‘313 Patent, Fig. 3. The operations are “transparent” because the involvement of the “host system” is minimized, not eliminated.

1 As the specification reveals, the key element here is the host processor. The specification
2 for the '313 Patent explains as follows:

3 As mentioned above, the host system will include a host memory space defined
4 by the addresses on the host bus. A pre-specified block of the host memory space
5 is set aside for the adapter interface addresses. The adapter includes host interface
6 logic which is responsive to accesses across the host bus within the adapter
7 interface address block. Also in the adapter is a host independent memory. ...
8 ***[The host interface logic] basically manage[s] communication of data between
the independent memory and the host in response to writes by the host system to
the adapter interface address block. This relieves the host of any address
translations or buffer management functions for the transmit and receive
operations.***

9 '313 Patent, col. 9:44-10:2 (emphasis added) (internal references omitted). The element of the
10 host system that is relieved of "any address translations or buffer management functions" is the
11 host processor. Thus, in the context of the '313 Patent, "operations transparent to the host
12 system" are performed by the host interface logic which "minimizes" the use of host processor
13 resources and host bus traffic by relieving the host processor of "any address translations or
14 buffer management functions." Accordingly, USEI's proposed construction is consistent with
15 the claims and specification of the '313 Patent.
16

17 In contrast, Defendants ask the Court to commit reversible error by adopting a
18 construction that directly contradicts the specification—"operations that do not ***involve*** the host
19 system." *C.R. Bard, Inc. v. United States Surgical Corp.*, 388 F.3d 858, 865 (Fed Cir. 2004)
20 ("[A] construction that excludes a preferred embodiment is rarely, if ever, correct."). As
21 described above, the operations that are "transparent" to the host system clearly require
22 interactions with at least host memory as they involve managing the transfer of data between a
23 block of "host memory space defined by the addresses on the host bus" and memory in the
24 network adapter; such operations certainly ***involve*** the host system. For this reason, Defendants'
25 proposed construction is impermissibly narrow and misleading.
26
27
28

The Court should adopt a construction consistent with the language of the claims and the specification. *Vitronics*, 90 F.3d at 1582 (“[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.”). Here, one of ordinary skill in the art would understand “operations transparent to the host system” in the context of the claims and specification of the ‘313 Patent to mean “operations capable of being performed without the involvement of the host processor.” See Mitzenmacher Decl. at 17-19.

3. “host processor interrupt latency”

‘459 Patent, Claims 22, 34, and 44

Plaintiff’s Position	Defendants’ Position
the time between when the network adapter has completed a transfer and when the host processor is able to service the interrupt	the period of time when a device such as network adapter generates an interrupt signal and when the host processor is able to service the device

The Federal Circuit has made clear that a patent specification “acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Phillips*, 415 F.3d at 1321 (citing *Vitronics*, 90 F.3d at 1582); see also *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) (“Even when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.”). Here, the specification of the ‘459 Patent expressly defines the term “host processor interrupt latency” to mean “the time between when the network adapter has completed a transfer and when the host processor is able to service the interrupt.” See ‘459 Patent, col. 1:63-66.

The specification explains that when a data frame is transferred between a communications network and a host computer, the network adapter sends an interrupt to the host processor. See ‘459 Patent, col. 1:15-2:5. In prior art systems, the interrupt is generated by the

1 network adapter and is not sent to the host processor until the transfer of the data frame is
 2 complete. *Id.* Because the host processor must determine the cause of the interrupt and take
 3 appropriate action—for example, saving the host processor’s current environment or system
 4 parameters—before it services the interrupt (*i.e.*, process the incoming data frame), “there is
 5 interrupt latency ***between when the network has completed the transfer and when the host***
 6 ***processor is able to service the interrupt.***” *Id.* at 1:63-66. The specification further explains that
 7 interrupt latency is reduced or eliminated by generating the interrupt to the host processor during
 8 the transfer of the data frame; thus, allowing the host processor’s interrupt routine to coincide
 9 with the transfer of the remainder of the data frame. *Id.* at 6:9-22. Because the patentees acted
 10 as their own lexicographer with regard to “host processor interrupt latency,” the Court should
 11 construe “host processor interrupt latency” in the context of the claims and specification of the
 12 ‘459 Patent to mean “the time between when the network adapter has completed a transfer and
 13 when the host processor is able to service the interrupt,” adopting USEI’s proposed
 14 construction.⁹

17 Defendants’ proposed construction—“the period of time when a device such as network
 18 adapter generates an interrupt signal and when the host processor is able to service the device”—
 19 is illogical and contradicted by the specification. The ‘459 claims and specification discuss the
 20 concept of eliminating or reducing interrupt latency. *See, e.g.*, ‘459 Patent, Claim 22; ‘459
 21 Patent, col. 6:9-22. Applying the Defendants’ proposed construction, the only way to eliminate
 22 or reduce interrupt latency would be to speed up (or eliminate) the host processor’s interrupt
 23 routine—*i.e.*, the process of determining the cause of the interrupt and taking any appropriate
 24

25
 26 ⁹ A person of ordinary skill in the art would understand “host processor interrupt latency” in the
 27 context of the claims and specification of the ‘459 Patent to mean “the time between when the
 28 network adapter has completed a transfer and when the host processor is able to service the
 interrupt.” *See* Mitzenmacher Decl at 15-16.

1 action. The specification teaches, however, that interrupt latency is eliminated or reduced not by
 2 speeding up the host processor's interrupt routine, but "by allowing [the] host processor's
 3 interrupt routine to coincide with the transfer of the remainder of the data frame." *Id.* at 6:20-22.
 4 Stated differently, Defendants' proposed construction contradicts the '459 specification because
 5 the use of the early interrupt signal would have absolutely no effect on "the period of time when
 6 a device such as network adapter generates an interrupt signal and when the host processor is
 7 able to service the device."

9 The Court should reject Defendants' proposed construction because it contradicts the
 10 '459 specification, as such a construction is "rarely, if ever, correct." *Vitronics*, 90 F.3d at 1583.

11 **B. The Court Should Adopt Judge Walker's Prior Rulings With Regard To The**
 12 **Disputed Claim Terms**

13 **1. "buffer memory for storing data of frames composed by the host**
computer for transmission on the communications medium"

14 '872 Patent, Claim 1

Plaintiff's Position	Defendants' Position
buffer memory for storing data of frames composed by the host computer for transmission on the communications medium, wherein the buffer memory is able to retain a frame of data that has been transmitted	a transmit buffer, to be distinguished from a First-In-First-Out (FIFO) system

20 Judge Walker construed the terms "buffer" and "buffer memory" in the context of the
 21 Patents-in-Suit and determined that they were entitled to their plain and ordinary meaning—"a
 22 memory for temporary storage of data." *Markman* Order at 7-10, 14-15. Addressing these same
 23 terms in the context of the '872, '094, and '459 Patents, Judge Walker determined as follows:

25 The claim terms at issue are not ambiguous. Both the plain meaning and the
 26 prosecution history support the construction that [Plaintiff] proposes. For the
 27 reasons stated above, the court adopts [Plaintiff's] proposed construction "a
 28 memory for temporary storage of data."

1 *Id.* at 10. On September 16, 2011—one week before the deadline for Plaintiff’s Opening
 2 *Markman* Brief, Defendants changed their position and agreed for the first time to adopt the
 3 construction for “buffer” and “buffer memory” ordered by Judge Walker in the Realtek
 4 Litigation and proposed by Plaintiff here. Defendants, however, refused to agree to USEI’s
 5 proposed construction for the phrase “buffer memory for storing data of frames composed by the
 6 host computer for transmission on the communications medium.”

8 Defendants are correct that the inventions of the ‘872 Patent involve “transmit buffers.”
 9 A “transmit buffer,” however, has no particular characteristics other than identifying the
 10 direction of data flow in which the buffer is employed. For this reason, it is redundant to define
 11 “buffer” as a “transmit buffer”—as proposed by Defendants, when each of the asserted claims of
 12 the ‘872 and ‘094 Patents discuss data frame *transmission*, as opposed to data frame *reception*.
 13

14 Moreover, two types of “transmit buffers” are discussed in the specification of the ‘872
 15 Patent; specifically, transmit data buffers and first-in-first-out (“FIFO”) systems. ‘872 Patent,
 16 col. 1:36-2:11. The specification compares the advantages and disadvantages of each, describing
 17 one advantage of a transmit data buffer as allowing the data to be retained in the buffer such that
 18 it can be resent if the original transmission is cancelled. *Id.* The specification concludes that the
 19 present invention is an improvement that “provide[s] the *advantages* of a transmit data buffer,
 20 while maintaining the communications throughput available from the simpler FIFO-based
 21 systems.” ‘872 Patent, col. 2:8-11 (emphasis added). Thus, while the specification of the ‘872
 22 discusses certain types of prior art FIFO-based systems that could not retain and reuse data, the
 23 specification expressly discloses certain types of FIFO buffers, particularly where they have the
 24 ability to begin the transmission of the frame to the network prior to the transfer of the entire
 25 frame into the adapter’s buffer and the ability to retain data in the buffer until after it has been
 26 successfully transmitted. *See, e.g.*, ‘872 Patent, col. 29:6-9 (“the system is enabled to begin
 27
 28

1 transmission of a frame onto the network media prior to transfer of the entire frame into the
2 adapter's buffer"); '872 Patent, col. 1:43-45 ("[i]f the frame transmission is cancelled, the data
3 may be retained").

4 For these reasons, one of ordinary skill in the art would understand "buffer memory for
5 storing data of frames composed by the host computer for transmission on the communications
6 medium" in the context of the claims and specification of the '872 Patent to mean "buffer
7 memory for storing data of frames composed by the host computer for transmission on the
8 communications medium, wherein the buffer memory is able to retain a frame of data that has
9 been transmitted." See Mitzenmacher Decl. at 4-8.

11 Instead of challenging Judge Walker's *Markman* Order directly, Defendants attempt an
12 end run around his prior ruling. Defendants ask the Court to construe the phrase "buffer memory
13 for storing data of frames composed by the host computer for transmission on the
14 communications medium" to mean "a transmit buffer, to be distinguished from a First-In-First-
15 Out (FIFO) system."

17 Tellingly, Defendants' proposed construction for the larger "buffer memory" phrase in
18 dispute here is nearly identical to the proposed construction for "buffer" and "buffer memory"
19 specifically rejected by Judge Walker in the Realtek Litigation. *Markman* Order at 7-10. A
20 defendant in the Realtek Litigation erroneously argued that the term "buffer memory" "must
21 mean a transmit buffer, that is ... not a first-in-first-out (FIFO) system." Realtek Semiconductor
22 Corporation's Responsive Claim Construction Brief, *3Com Corp. v. Realtek Semiconductor*
23 *Corp., et al.*, Civil Action No. 3:03-cv-02177 (Dkt. 333), at 8 (N.D. Cal. March 24, 2006)
24 ("Realtek Brief"), attached to Jones Decl. as Exhibit J. Specifically, the defendant argued that:
25 (1) the patentee disclaimed FIFO-based systems in the '872 and '094 specification; (2) the
26 prosecution history supports its narrow construction; and (3) that a plain and ordinary meaning
27
28

1 construction would render the claims invalid. *Markman* Order at 7-10. Judge Walker addressed
 2 and rejected each of these arguments. *Id.* For the same reasons expressed by Judge Walker in
 3 the Realtek Litigation, this Court should reject Defendants' proposed construction here.

4 2. "logic"

5 '459 Patent, Claims 1, 2, 3, 22, 24, 34, 44, and 46

6 '872 Patent, Claims 1, 5, 7, 21, and 23

7 '313 Patent, Claims 3, 5, 7, 9, 10, 14, 16, 17, and 19

8 Plaintiff's Position	Defendants' Position
9 circuitry	Should be construed as part of larger phrases subject to 35 U.S.C. § 112 P. 6.

10 Defendants again seek to relitigate an issue specifically ruled on by Judge Walker in the
 11 context of this patent family. In the Realtek *Markman* Order, Judge Walker determined that in
 12 the context of the Patents-in-Suit the term "'logic' does not fall within 35 U.S.C. § 112(6)."

13 *Markman* Order at 29. In support of his determination, Judge Walker noted that technical
 14 dictionary definitions suggest that the term "logic" itself connotes some structure.¹⁰ *Markman*
 15 Order at 28. Judge Walker also discussed the similarity between "logic" and "circuitry," which
 16 the Federal Circuit has also found "to suggest structure to persons of ordinary skill in the art."
 17 *Markman* Order at 27-29 ("The difference between the *Linear* term 'circuitry' and the 'logic'
 18 term in this case is not significant."); *see also Linear Tech. Corp. v. Impala Linear Corp.*, 379
 19 F.3d 1311, 1320 (Fed. Cir. 2004).

20 This Court also held that the term "logic" denotes structure and is not purely functional in
 21 *PCTEL, Inc. v. Agere Sys.* *See PCTEL, Inc. v. Agere Sys.*, No. 03-2474, U.S. Dist. LEXIS

22
 23
 24
 25 ¹⁰ *See also* McGraw-Hill Dictionary of Scientific and Technical Terms, 1231 (6th ed. 2003)
 26 (defining "logic" as a "[g]eneral term for various types of gates, flip-flops, and other on/off
 27 circuits used to perform problem-solving functions in a digital computer"); IBM Dictionary of
 28 Computing, 396 (10th ed. 1994) (defining "logic" as "[t]he systematized interconnection of
 digital switching functions, circuits, or devices").

34288, at *35-36 (N.D. Cal. Sept. 8, 2005). In *PCTEL*, the Court agreed with the plaintiff that “‘logic’ is synonymous with circuitry,” and that “‘logic,’ by itself, can connote structure.” *Id.* at *63. Having equated “logic” and “circuitry,” the Court noted that “‘the term ‘circuit’ with an appropriate identifier such as ‘interface,’ ‘programming’ and ‘logic,’ certainly identifies some structural meaning to one of ordinary skill in the art,’” and that “[s]imilarly . . . ‘when the structure-connoting term ‘circuit’ is coupled with a description of the circuit’s operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art...’” *See PCTEL, Inc.*, U.S. Dist. LEXIS 34288, at *63-64 (citing *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003); *Linear Tech.*, 379 F.3d at 1320).

In addition, a person of ordinary skill in the art would understand “logic” in the context of the Patents-in-Suit to mean “circuitry.” *See Mitzenmacher Decl.* at 8.

Defendants, nevertheless, ask the Court to reach a result that directly contradicts Judge Walker’s *Markman* Order by insisting that 35 U.S.C. § 112, ¶ 6 applies to the twenty-two claim terms comprising “logic,” listed as follows:

- “transmit logic . . . for retrieving data from the buffer memory and supplying retrieved data for transmission on the communications medium”
- “underrun control logic, which detects a condition in which the means for transferring falls behind the transmit logic, and supplies a bad frame signal to the communications medium in response to the underrun condition”
- “logic ... which monitors the transferring of data of a frame to the buffer memory to make a threshold determination of an amount of data of the frame transferred to the buffer memory”
- “logic ... which initiates transmission of the frame from the buffer memory to the medium access controller prior to transfer of all of the data of the frame to the buffer memory, including logic which initiates transmission of the frame when no complete frame of data is present in the buffer memory”
- “host interface logic for transferring the data frame between the host system and the buffer memory”
- “host interface logic for transferring the data frame from the buffer memory to the host system”
- “network interface logic for transferring the data frame between the network transceiver and the buffer memory”

- 1 • “receive logic for transferring a received data frame from the network transceiver to the buffer memory”
- 2 • “receive logic for receiving the data frame from the network transceiver to the buffer memory”
- 3 • “transfer descriptor logic for mapping transfer descriptors from the host system to the buffer memory”
- 4 • “upload logic . . . for transferring a data frame from the buffer memory to host memory”
- 5 • “transmit descriptor logic for mapping transmit descriptors identifying data to be transmitted from the host system to the buffer memory”
- 6 • “transmit descriptor logic for mapping transmit descriptors identifying data to be transmitted from the host system from the first area to the transmit buffer”
- 7 • “download logic . . . for retrieving data from memory in the host address space and storing retrieved data in the buffer memory”
- 8 • “download logic . . . for retrieving data from memory in the host address space and storing retrieved data in the transmit data buffer”
- 9 • “upload logic . . .for transferring data from the buffer memory to memory in the host memory space”
- 10 • “transmit descriptor logic for mapping transmit descriptors from the first area to the transmit descriptor ring buffer and managing breaks in the transmit descriptor ring buffer”
- 11 • “transmit logic . . . for retrieving data from the buffer memory and supplying retrieved data to the network transceiver for transmission on the network”
- 12 • “transmit logic . . . for retrieving data from the transmit descriptor ring buffer and transmit data buffer and supplying retrieved data to the network transceiver for transmission on the network”
- 13 • “transmit logic . . . retrieving data from the transmit buffer and supplying retrieved data to the network transceiver for transmission on the network”
- 14 • “transfer descriptor logic for mapping transfer descriptors from the host system to the buffer memory”
- 15 • “receive logic for mapping received data from the network transceiver to the buffer memory”
- 16
- 17
- 18
- 19

20 For all of the reasons discussed above, Defendants cannot overcome the strong presumption that
 21 § 112, ¶ 6 does not apply to claim terms that do not include the term “means.” *Lighting World,*
 22 *Inc.*, 382 F.3d at 1358. Accordingly, the Court should conclude, as Judge Walker already has,
 23 that the term “logic” means “circuitry” to a person of ordinary skill in the art and that the twenty-
 24 two “logic” terms proposed for construction by Defendants do not fall within § 112, ¶ 6.

1 **3. “alterable storage location”**

2 ‘459 Patent, Claims 1, 22, 34, and 44

3 Plaintiff’s Position	Defendants’ Position
4 storage location whose value is changeable	No construction required.

5 **4. “underrun” / “falls behind”**

6 ‘872 Patent, Claim 1

7 ‘094 Patent, Claims 4, 16, and 41

8 Plaintiff’s Position	Defendants’ Position
9 a condition in which the receiving of data 10 into the buffer is not keeping up with the 11 transmitting of data out of the buffer	No construction required. Alternatively for underrun: where the data transfer rate from host memory to the buffer memory did not keep up with transmission (also known as a DMA underrun)

12 The Court should also adopt the constructions adopted by Judge Walker in the Realtek
13 Litigation for “alterable storage location,” “underrun,” and “falls behind.” *Markman* Order at
14 10, 15-16. Defendants do not believe construction is required for these terms. In the alternative,
15 Defendants propose a construction for underrun as follows: where the data transfer rate from
16 host memory to the buffer memory did not keep up with transmission (also known as a DMA
17 underrun). Defendants, however, provide no intrinsic support for their alternative construction.

18 The constructions adopted by Judge Walker for the above-referenced terms are consistent
19 with their plain and ordinary meaning. *See, e.g., Markman* Order at 15-16. Defendants have
20 failed to provide the Court with any reason to reach a contrary result. For these reasons, the
21 Court should adopt USEI’s proposed constructions, which are identical to the constructions
22 adopted by Judge Walker in the Realtek Litigation.
23
24
25
26
27
28

C. The Court Should Reject Defendants’ Allegations That Certain Disputed Claim Terms Lack Written Description Or Are Indefinite

1. “frame transmission task”

‘094 Patent, Claims 1, 2, 3, and 5

Plaintiff’s Position	Defendants’ Position
command or instruction to initiate transmission of a frame from the buffer memory to a communications medium at a determined point, wherein the buffer memory is able to retain a frame of data that has been transmitted	<p>Fails to satisfy 35 U.S.C. § 112 P. 2, written description</p> <p>Alternatively: Should be construed as part of larger phrase</p>

Similar to “host processor interrupt latency,” the patentees acted as their own lexicographer by defining “frame transmission task” in the claims and specification of the ‘094 Patent. *See Phillips*, 415 F.3d at 1321 (patent specification “acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication); *see also Irdeto Access*, 383 F.3d at 1300 (“Even when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.”).

The ‘094 Patent makes clear that a “frame transmission task” is a “command or instruction to initiate transmission of a frame from the buffer memory to a communications medium at a determined point, wherein the buffer memory is able to retain a frame of data that has been transmitted.” *See, e.g.*, ‘094 Patent, Claim 1; ‘094 Patent, col. 1:36-2:27. The claims of the ‘094 Patent describe the “frame transmission task” as taking place in the “network interface device” and provide that its purpose is “to initiate transmission of the frame from the buffer memory to the network in parallel with the frame transfer task before the frame is completely transferred to the buffer memory.” ‘094 Patent, Claim 1. The ‘094 specification further clarifies that the “network interface controller includes logic for initiating transmission of the frame when the threshold determination indicates that a sufficient portion of the frame is resident in the

transmit buffer, and prior to the transfer of all of the data of the frame into the transmit buffer.”
 ‘094 Patent, col. 2:16-21. Furthermore, the ‘094 specification notes the possibility of optimizing
 or otherwise altering the point at which the transmission of the frame is initiated. *See* ‘094
 Patent, col. 2:24-27 (“the threshold value may be set by the host system to optimize performance
 using the alterable threshold store and the posted status information”); ‘094 Patent, col. 20:12-33.
 Finally, for the same reasons discussed above with respect to the “buffer memory” term, it is
 clear from the ‘094 specification that the claimed invention contemplates the ability to retain data
 in the buffer until the frame is successfully transmitted to the network. *See* Section IV.B.1
 above. Accordingly, the Court should adopt USEI’s proposed construction for “frame
 transmission task.”

Instead of construing “frame transmission task,” Defendants would have the Court
 construe a larger phrase—“executing a frame transmission task in the network interface device to
 initiate transmission of the frame from the buffer memory to the network.”¹¹ As an initial matter,
 USEI notes that Defendants’ proposed phrase constitutes nearly an entire claim element. By
 proposing the phrase, Defendants reveal that their true intent is to rewrite the patent, not
 “interpret” a disputed claim term. *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir.
 1999) (“Courts do not rewrite claims; instead, we give effect to the terms chosen by the
 patentee.”). To the extent the Court addresses Defendants’ larger phrase, USEI submits that
 upon construction of “frame transmission task” and “buffer memory,” this larger phrase needs no
 further construction and is entitled to its plain and ordinary meaning. *See* Mitzenmacher Decl. at
 10-12.

¹¹ Defendants’ proposed construction is as follows: “performing a comparison between a threshold
 and the number of bytes of a frame transferred into the transmit buffer, to be distinguished from a
 FIFO, to initiate transmission of the data frame from the buffer memory to the network.”

Defendants’ proposed construction for this larger phrase violates two core principles of claim construction. First, Defendants’ proposed construction is inconsistent with the specification. As with their previously proposed construction for “buffer” and “buffer memory,” Defendants once again attempt to introduce the concept of a “transmit buffer, to be distinguished from a FIFO” into their proposed construction. For the same reasons discussed above, Defendants attempt to introduce this concept into a construction for “frame transmission task” should be rejected as inconsistent with the ‘094 specification. *See* Section IV.B.1 above. Second, Defendants’ proposed construction violates the principle of claim differentiation. Claim 7 of the ‘094 Patent provides: “[t]he method as in claim 1, including making a threshold determination based on a comparison of a count of data transferred into the buffer memory with a threshold value.” Because Claim 7 (a dependent claim) includes a limitation for performing a comparison between a threshold value and the amount of data transferred into the buffer, the Court should presume that limitation is not included in Claim 1 (the independent claim). “The presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is *not* present in the independent claim.” *Phillips*, 415 F.3d at 1314-15 (emphasis added); *see also Liebel-Flarsheim*, 358 F.3d at 910. Accordingly, an appropriate construction for the disputed term should not include a limitation for “performing a comparison between a threshold and the number of bytes of a frame transferred into the transmit buffer, to be distinguished from a FIFO.”¹²

Finally, Defendants’ allegation that the disputed claim fails to satisfy the “written description” requirement is without merit. To satisfy the written description requirement, a

¹² Once again, Defendants improperly insert the phrase “to be distinguished from a FIFO” into a proposed construction in an attempt to manufacture a non-infringement position. Defendants’ generic reference to a “FIFO” is misleading and inaccurate. *See* Section IV.B.1; *see also Markman* Order at 8 (determining patentee did not disclaim all FIFO-based systems).

patent specification need only describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. *See, e.g., Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319 (Fed. Cir. 2003); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1563 (Fed. Cir. 1991). Here, the '094 specification provides sufficient detail because, as discussed above, it describes distinguishing characteristics of the technology sufficient to show that the applicant was in possession of the claimed invention.¹³

2. “during the transferring of the data frame”

'459 Patent, Claim 1

Plaintiff's Position	Defendants' Position
plain and ordinary meaning Alternatively: before the transfer of the data frame is complete	Fails to satisfy 35 U.S.C. § 112 P. 2, indefiniteness

Defendants allege that the term “during the transferring of the data frame” is indefinite. Defendants' position lacks merit. As discussed above, a term will be found indefinite only if it is “insolubly ambiguous”; *i.e.*, where the Court cannot give the term “any reasonable meaning.” *Exxon Research & Eng'g*, 265 F.3d at 1375; *see also Datamize*, 417 F.3d at 1345 (finding purely subjective phrase “aesthetically pleasing” to be indefinite). Here, the disputed phrase easily clears this low bar. In fact, USEI submits that the term has a plain and ordinary meaning to a person of ordinary skill in the art—“before the transfer of the data frame is complete.” *See Mitzenmacher Decl.* at 13-15.

¹³ Defendants raise a similar argument with respect to three similar terms: (1) “frame transfer task initiated in the host system;” (2) “initiating a frame transfer task in the host system to transfer a frame;” and (3) “executing a medium access task in the network interface device to initiate access to the network, and upon access transmitting the frame from the buffer memory to the network.” Defendants' arguments with respect to each of these terms fail for similar reasons. *See Mitzenmacher Decl.* at 8-13.

Defendants' allegation of indefiniteness is particularly dubious where, as here, Defendants previously provided a proposed construction for the allegedly indefinite term *and* offered the allegedly indefinite term as part of their proposed construction for another disputed term. *See* Defendants' Patent L.R. 4-2 Exchange of Preliminary Claim Constructions and Extrinsic Evidence, at T1-1, T1-4 ("Defendants' 4-2 Disclosure"), attached to Jones Decl. as Exhibit K. Defendants' 4-2 Disclosure provided as follows:

Disputed Claim Term	Defendants' Proposed Construction
allowing the period of time for the host processor to respond to the indication signal to occur <i>during the transferring of the data frame</i>	allowing the host processor to respond to the "indication signal" before the transfer that is counted is complete
early receive signal	A signal that is sent <i>during the transferring of the data frame</i> from the network transceiver to the buffer memory that indicates a subsequent interrupt <i>during the transferring of the data frame</i> from the network transceiver to the buffer memory

Having previously proposed a construction for the term "during the transferring of the data frame" and used the phrase to define another disputed term, it is clear that the Defendants understand the meaning of this term. Defendants certainly cannot reasonably argue that it is impossible to give any reasonable meaning to "during the transferring of the data frame." Accordingly, the Court should reject Defendants' allegation of indefiniteness and adopt USEI's proposed construction for "during the transferring of the data frame."

1 **3. “the receive threshold logic”**

2 ‘459 Patent, Claims 22 and 34

3 Plaintiff’s Position	Defendants’ Position
4 circuitry that generates an early indication 5 signal based on an amount of data received 6 from the network	7 Fails to satisfy 35 U.S.C. § 112 P. 2, 8 indefiniteness

9 For similar reasons, the Court should reject Defendants’ allegation of indefiniteness with
10 regard to “the receive threshold logic” and adopt USEI’s proposed construction. Here again, the
11 disputed term easily clears the low bar for definiteness.

12 As discussed above, “logic” means “circuitry” in the context of the Patents-in-Suit. *See*
13 Section IV.B.2 above. Moreover, the ‘459 Patent specification expressly describes receive
14 threshold logic as “generat[ing] an early indication signal based on an amount of data received
15 from the network.” ‘459 Patent, col. 29:31-33. The specification further describes at least two
16 embodiments of receive threshold logic—the “look-ahead threshold logic” and the “length-left
17 threshold logic”—both of which are used to “generate an early indication signal based on how
18 many bytes of a data frame has been received.” ‘459 Patent, col. 29:33-39.

19 In addition, a number of claims in the ‘459 Patent describe “receive threshold logic” as
20 including: a counter, an alterable storage location containing a value, a means for comparing the
21 counter to the value in the alterable storage location, and a means for generating an indication
22 signal responsive to a comparison of the counter and the value in the alterable storage location.
23 *See, e.g.,* ‘459 Patent, Claim 34. Furthermore, the ‘459 Patent explains that “receive threshold
24 logic is implemented to determine how much of a data frame has been received from a
25 communications network to the network adapter before generating an early receive indication.”
26 ‘459 Patent, col. 41:56-59.

27 USEI submits that it is possible to construe “receive threshold logic” in light of the
28 claims and specification of the ‘459 Patent and that a person of ordinary skill in the art would

understand the term in the context of the ‘459 Patent to mean “circuitry that generates an early indication signal based on an amount of data received from the network.” *See* Mitzenmacher Decl. at 16-17.

D. The Court Should Reject Defendants’ Attempt To Improperly Expand The Recited Function And Required Structure For Disputed Claim Terms Subject to 35 U.S.C. § 112, ¶ 6

1. “means, ..., for monitoring the transferring of data of a frame to the buffer memory”

‘872 Patent, Claim 1

Plaintiff’s Position	Defendants’ Position
<p>Function: for monitoring the transferring of data of a frame</p> <p>Structure: The “means . . . for monitoring” disclosed in the specification under 35 U.S.C. § 112 ¶ 6 includes, without limitation: threshold logic 36 (fig. 2; col. 4, ln. 30-31, 40- 41); early transmit logic 6A (fig. 1; col. 4, ln. 11); 11 bit counter 300 (fig. 11; col. 23, ln. 30); and downloadbytesResidentValue (fig. 11; col. 24, ln. 9); and equivalents thereto.</p>	<p>Function: monitoring the transferring of data of a frame to the buffer memory to make a threshold determination of an amount of data of the frame transferred to the buffer memory</p> <p>Structure (all citations are to the ‘872 patent): Fig. 2, Threshold Logic 36, threshold store 43, Col. 4:30-33, 4:46-47; Figs. 11-16; Col. 23:28-28:23. Fig. 8, Immediate data; Col. 13:1-21:39</p>

The Court should adopt USEI’s proposed function and corresponding structure for this claim term. The function of this term is straightforward—monitoring the transferring of data of a frame. Defendants’ attempt to read “to the buffer memory to make a threshold determination of an amount of data of the frame transferred to the buffer memory” into the function is based on a misreading of the claim term and is unsupported by the specification. Defendants’ expanded language describes the purpose for “monitoring the transferring of data of a frame;” it is not functional language.

Moreover, the specification plainly discloses the corresponding structure for the recited function. *See, e.g.*, ‘872 Patent, col. 4:30-31 (“threshold logic 36 is coupled with the host interface logic 31 to monitor the transfer of data from the host computer 30 into the frame buffer”); ‘872 Patent, col. 4:11 (“The adapter 6 also includes early transmit logic 6A for

monitoring the transfer of data from the host system 1 into the adapter memory.”) Defendants’ proposed structure is overly broad, including elements with no clear link to the recited function. *In re Aoyama*, 2011 WL 3796243 (Fed. Cir. 2011) (“structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim”) (quoting *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003)). In fact, Defendants’ proposed structure includes five entire columns of patent language. *See Golight*, 355 F.3d at 1334-35 (stating structures “not required for performing claimed function” are “superfluous” to claim construction analysis and do not serve as claim limitations). Accordingly, the Court should reject Defendants’ attempt to improperly expand the recited function and the required structure for performing that function. *See Mitzenmacher Decl.* at 20.

2. “means for comparing the counter to the threshold value in the alterable storage location and generating an indication signal to the host processor responsive to a comparison of the counter and the alterable storage location”

‘459 Patent, Claim 1

Plaintiff’s Position	Defendants’ Position
<p>Function: comparing the counter to the threshold value in the alterable storage location and generating an indication signal to the host processor responsive to a comparison of the counter and the alterable storage location</p> <p>Structure: The “means” disclosed in the specification under 35 U.S.C. § 112 ¶ 6 includes, without limitation:</p> <p>Embodiment 1a: logic block 222 (fig. 14; col. 32:50-55); comparator 224 (fig. 14; col. 32:46); LOOK AHEAD THRESH register 223 (fig. 14; col. 32:37-44); EARLY RCV control block 225 (fig. 14; col. 32:31-36); and equivalents thereto.</p> <p>Embodiment 1b: logic block 218 (fig. 14; col. 32:15-22); logic block 219 (fig. 14; col. 32:3); comparator 213 (fig. 14; col. 32:25-26); LENGTH LEFT THRESH register 221 (fig. 14; col. 32:9-15); RCV COMPLETE control block 210 (fig. 14, col. 31:41-</p>	<p>Function “comparing the counter to the threshold value in the alterable storage location and generating an indication signal to the host processor responsive to a comparison of the counter and the alterable storage location”</p> <p>Structure (all citations are to the ‘459 patent): <i>See</i> Patent Local Rule 4-3 Joint Claim Construction and Prehearing Statement</p>

49); **LENGTH LEFT THRESH counter 216** (fig. 14; col. 32:23-30); and equivalents thereto.

Embodiment 2a: **comparator 318** (fig. 21; col. 36:15); **XFER COMPLETE THRESH registers 315 and 316** (fig. 20; col. 35:36-51); and equivalents thereto.

Embodiment 2b: **comparator 341** (fig. 23; col. 37:58-59), **XFER THRESH MET register 345** (fig. 23; col. 38:7-8); and equivalents thereto.

Embodiment 3: **COMPLETE THRESH VALUE registers 508 and 509** (fig. 24; col. 38:23-26); **THRESHOLD COMPARE block 511** (fig. 24, 26; col. 38:42, 44); **comparator 517** (fig. 26; col. 38:2-5); **EARLY INDICATION LATCH block 512** (fig. 24, 27); and equivalents thereto.

Embodiment 4: **COMPLETE THRESH VALUE registers 609 and 610** (fig. 29; col. 39:64-40:8); **comparator 615** (fig. 31; col. 40:41-49); **EARLY INDICATION LATCH block** (fig. 33; col. 41:1-18); and equivalents thereto.

For similar reasons, the Court should adopt USEI’s proposed structure for “means for comparing the counter to the threshold value in the alterable storage location and generating an indication signal to the host processor responsive to a comparison of the counter and the alterable storage location.” Here, the parties agree on the recited function; however, Defendants again improperly include elements in their proposed structure that are not required to perform the recited function. *See, e.g., Golight*, 355 F.3d at 1334-35.

For example, Defendants’ proposed structure requires both “a look-ahead threshold” and “a length-left threshold.” Defendants’ position is an improper attempt to import structural limitations from a preferred embodiment in the specification. In fact, the specification is explicit that both “a look-ahead threshold” and “a length-left threshold” are present in one possible embodiment of the claimed invention, providing as follows:

In *one embodiment* of the present invention, the network adapter has two types of receive threshold logic. The receive threshold logic generates an early indication signal based on an amount of data received from the network. The first receive

1 threshold logic or look-ahead threshold logic generates an early indication signal
 2 based on how many bytes of a data frame has been received. The second
 3 threshold indication logic or length-left threshold logic generates an early
 4 indication signal based on how many bytes of a data frame remains to be
 5 received.

6 ‘459 Patent, col. 29:29-39.

7 The claims and specification of the ‘459 Patent teach that “look-ahead threshold logic”
 8 and “length-left threshold logic” are two different types of “receive threshold logic” with either
 9 capable of performing the recited function. *See* ‘459 Patent, Claims 22, 34, and 40; ‘459 Patent,
 10 col. 29:29-39. As discussed above, it is possible for both to be present in an embodiment of the
 11 claimed invention; however, both are not required. *Id.* Accordingly, the Court should reject
 12 Defendants’ attempt to import structural limitations from a preferred embodiment, and instead
 13 adopt USEI’s proposed construction for the disputed claim term. *See* Mitzenmacher Decl. at 21.

14 **E. Claim Terms Which the Parties Dispute are Subject to 35 U.S.C. § 112 ¶ 6**

15 The Court should reject Defendants’ attempt to bring ordinary claim terms under 35
 16 U.S.C. § 112, ¶ 6. Here, Defendants are attempting to apply 35 U.S.C. § 112, ¶ 6 to the phrases
 17 “host interface means ... for managing data transfers between the host address space and the
 18 buffer memory in operations transparent to the host system” and “network interface means ... for
 19 managing data transfers between the buffer memory and the network transceiver.”

20 As discussed above, the rebuttal presumption that 35 U.S.C. § 112, ¶ 6 applies to a claim
 21 term which includes “means” can be overcome where a claim term recites sufficiently definitive
 22 structure. Moreover, the Federal Circuit has determined that the inclusion of an appropriate
 23 identifier such as “interface,” “programming,” and “logic” can provide some structural meaning
 24 to one of ordinary skill in the art. *See Linear Tech.*, 379 F.3d at 1320 (citing *Apex*, 325 F.3d at
 25 1373). Applied to the two disputed claim terms, the “host interface” and “network interface”
 26 identifiers, considered in connection with the description of the operation to be performed,
 27
 28

provide sufficient structural meaning to one of ordinary skill in the art. Accordingly, the Court should reject Defendants' attempt to apply 35 U.S.C. § 112, ¶ 6 to these claim terms, *see* Mitzenmacher Decl. at 24-25; instead, the Court should give each of the disputed terms below their plain and ordinary meaning.

1. "host interface means ... for managing data transfers between the host address space and the buffer memory in operations transparent to the host system"

'313 Patent, Claims 1, 3, 5, 7, and 9

Plaintiff's Position	Defendants' Position
<p>USEI does not agree that this term is governed by 35 U.S.C. § 112 ¶ 6, as any structure which may be required is sufficiently conveyed in the term itself. USEI submits that this term is entitled to its plain and ordinary meaning.</p> <p>In the alternative, and to the extent the Court finds this element to be subject to § 112 ¶ 6, "host interface means ... for managing data transfers between the host address space and the buffer memory in operations transparent to the host system" disclosed in the specification under § 112 ¶ 6 includes, without limitation: host interface logic 102 (fig. 3); host descriptor logic 150 (fig. 9); download DMA logic 151 (fig. 9); upload DMA logic 300 (fig 11); view logic 301 (fig. 11); transfer descriptor area 304 (fig 11); transmit descriptor ring 200 (fig. 10A-10E); transmit data buffers 201-0 and 201-1 (fig. 10A-10E); and equivalents thereto.</p>	<p><u>Function:</u></p> <p>managing data transfers between the host address space and the buffer memory in operations transparent to the host system</p> <p><u>Structure (all citations are to the '313 patent):</u> <i>See</i> Patent Local Rule 4-3 Joint Claim Construction and Prehearing Statement</p>

To the extent the Court determines that 35 U.S.C. § 112, ¶ 6 applies to the phrase "host interface means ... for managing data transfers between the host address space and the buffer memory in operations transparent to the host system," the Court should construe the disputed phrase consistent with the structure provided by USEI above. While USEI's proposed structure is limited to elements necessary to perform the recited function, Defendants, once again, overreach by seeking to include numerous structural elements which are unnecessary to perform the recited function. *See, e.g., Golight*, 355 F.3d at 1334-35 (stating corresponding structure should only incorporate that which is necessary to perform the recited function).

One example of Defendants’ overreach is their position that an “8Kbyte adapter interface address/adapter interface address block” is required structure for “host interface means.” The ‘313 specification is explicit that the adapter interface address block is not an element of host interface logic. The ‘313 specification provides that the host interface logic resides on the network adapter. ‘313 Patent, col. 9:48 (“the adapter includes host interface logic 102”). In contrast, the adapter interface address block is found in host memory space. ‘313 Patent, col. 9:48 (“A pre-specified block 101 of the host memory space is set aside for the adapter interface addresses.”). Accordingly, an “8Kbyte adapter interface address/adapter interface address block” cannot be a required element of “host interface means.” *See* Mitzenmacher Decl. at 24-25.

If the Court determines that 35 U.S.C. § 112, ¶ 6 applies here, the Court should construe the disputed phrase consistent with the structure provided by USEI above because USEI’s proposed structure is limited to elements necessary to perform the recited function.

2. “network interface means ... for managing data transfers between the buffer memory and the network transceiver”

‘313 Patent, Claims 1, 5, 7, and 10

Plaintiff’s Position	Defendants’ Position
USEI does not agree that this term is governed by 35 U.S.C. § 112 ¶ 6, as any structure which may be required is sufficiently conveyed in the term itself. USEI submits that this term is entitled to its plain and ordinary meaning.	<u>Function (313 Patent, claims 1, 5, 7 and 10):</u> managing data transfers between the buffer memory and the network transceiver
In the alternative, and to the extent the Court finds these elements to be subject to § 112 ¶ 6, “network interface means ... for managing data transfers between the buffer memory and the network transceiver” and “network interface means ... for transferring data from the transmit buffer to the network transceiver and mapping data into the receive buffer from the network transceiver” disclosed in the specification under § 112 ¶ 6 includes, without limitation: network interface logic 104 (fig 3); transmit DMA logic 109 (fig 3); transmit DMA logic 155 (fig 9); transmit DMA 67 (fig 2); receive DMA logic 110 (fig 3); receive DMA 63 (fig. 2);	<u>Structure (all citations are to the ‘313 patent):</u> <i>See</i> Patent Local Rule 4-3 Joint Claim Construction and Prehearing Statement

<p>1 receive ring buffer area 303 (fig. 11); transfer</p> <p>2 descriptor area 304 (fig 11); receive DMA logic 302</p> <p>3 (fig 11); transmit descriptor ring 200 (fig. 10A-</p> <p>4 10E); transmit descriptor ring buffer 152 (fig 9);</p> <p>transmit data buffers 201-0 and 201-1 (fig. 10A-</p> <p>10E); transmit data buffers 153 and 154 (fig 9); and</p> <p>equivalents thereto.</p>	
---	--

5 To the extent the Court determines that 35 U.S.C. § 112, ¶ 6 applies to the phrase

6 “network interface means ... for managing data transfers between the buffer memory and the

7 network transceiver,” the Court should construe the disputed phrase consistent with the structure

8 provided by USEI above. Here again, Defendants overreach by seeking to include numerous

9 structural elements which are unnecessary to perform the recited function. *See, e.g., Golight,*

10 *355 F.3d at 1334-35* (stating corresponding structure should only incorporate that which is

11 necessary to perform the recited function).

12 For example, Defendants maintain that an “Adapter memory/RAM organized into the

13 Adapter RAM memory map, including Transmit Descriptors and Transfer Descriptor of Adapter

14 RAM memory map” is required structure. Simply put, this structure is not an element of the network

15 interface logic required to manage data transfers between the buffer memory and the network

16 transceiver. *See Mitzenmacher Decl. at 24-25.*

17 If the Court determines that 35 U.S.C. § 112, ¶ 6 applies here, the Court should construe the

18 disputed phrase consistent with the structure provided by USEI above because USEI’s proposed

19 structure is limited to elements necessary to perform the recited function.

20

21 **F. The Court Should Adopt USEI’s Proposed Construction For The Remaining**

22 **Disputed Terms**

23 USEI has addressed the terms designated as “most significant” by the parties and a

24 number of related terms. To the extent the Court considers the remaining disputed terms, USEI

25 has attached a chart setting forth its position for each term.¹⁴ USEI submits that application of

26

27 ¹⁴ *See* USEI’s Proposed Constructions for Disputed Claim Terms, attached to Jones Decl. as Exhibit

28 L.

1 the well-established rules of claim construction as discussed above will lead the Court to USEI's
2 proposed construction for each term. For this reason, USEI requests that the Court adopt USEI's
3 proposed construction for each of the remaining terms.

4 **V. CONCLUSION**

5 For the reasons set forth above, USEI respectfully requests that this Court construe the
6 disputed claim terms in accordance with USEI's positions.¹⁵ Defendants' proposed constructions
7 violate basic principles of claim construction and ignore both the intrinsic record of the Patents-
8 in-Suit and the plain and ordinary meaning of the claim terms themselves.
9

10
11
12 [SIGNATURE ON FOLLOWING PAGE]
13
14
15
16
17
18
19
20
21
22
23
24
25
26

27 ¹⁵ See USEI's Proposed Jury Instructions-Claim Construction, attached to Jones Decl. as Exhibit M.
28

1
2 DATED: September 23, 2011

ROBBINS GELLER RUDMAN
& DOWD, LLP

3
4
5 /s/ Peter M. Jones
PETER M. JONES

6 JOHN C. HERMAN
7 RYAN K. WALSH
8 PETER M. JONES
9 DAVID L. GANN
10 3424 Peachtree Road, N.E.
Monarch Centre, Suite 1650
Atlanta, Georgia 30326
Telephone: 404-504-6500
Facsimile: 404-504-6501

11 ROBBINS GELLER RUDMAN
12 & DOWD, LLP
MICHAEL J. DOWD
13 JOHN K. GRANT
SHAWN A. WILLIAMS
14 Post Montgomery Center
One Montgomery Street, Suite 1800
San Francisco, California 94104
15 Telephone: 415-288-4545
Facsimile: 415-288-4534

16
17 Attorneys for Plaintiff,
18 U.S. Ethernet Innovations, LLC
19
20
21
22
23
24
25
26
27
28

CERTIFICATE OF SERVICE

I hereby certify that on September 23, 2011, I authorized the electronic filing of the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to counsel of record who have consented to accept service of this document by electronic mail.

I certify under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

/s/ Peter M. Jones

PETER M. JONES